

CLAIMS

1. In a wireless communication system, a method for transmitting pilot
2 references from a plurality of transmission sources, the method comprising:
receiving at each transmission source one or more signals indicative of a
4 time reference for the communication system;
generating at each transmission source a plurality of pilot bursts for a
6 pilot reference, wherein the pilot bursts are in synchronization with the time
reference; and
8 transmitting the plurality of pilot bursts from each transmission source.
2. The method of claim 1, wherein pilot bursts from the plurality of
2 transmission sources are aligned in time at the time of transmission.
3. The method of claim 1, wherein the plurality of pilot bursts from each
2 transmission source are transmitted at predetermined time intervals.
4. The method of claim 1, wherein each of the plurality of pilot bursts
2 has a predefined width.
5. The method of claim 1, wherein each pilot burst is transmitted at or
2 near a maximum transmit power level of the transmission source.
6. The method of claim 1, further comprising:
2 withholding data transmission at each access point during transmission
of the pilot bursts.
7. The method of claim 1, further comprising:
2 processing at each transmission source pilot data in accordance with a
particular processing scheme such that the pilot reference from each
4 transmission source is differentiated from pilot references from other
transmission sources.
8. The method of claim 7, wherein the processing at each transmission
2 source includes
spreading the pilot data with a pseudo-noise (PN) sequence at a
4 particular offset that is different from offsets for other transmission sources.

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9. The method of claim 1, further comprising:

continuing transmission of the plurality of pilot bursts from a particular transmission source even if no data is to be transmitted from the transmission source.

10. The method of claim 1, wherein transmission from each transmission source occurs over slots, and wherein each slot covers a particular time period and includes a particular number of pilot bursts.

11. The method of claim 10, wherein each slot includes two pilot bursts.

12. The method of claim 10, wherein each pilot burst is associated with a respective portion of the slot and positioned in the center of the associated portion.

13. The method of claim 10, further comprising:
padding both sides of each pilot burst in an idle slot with additional transmissions of at least a particular minimum period.

14. The method of claim 1, further comprising:
transmitting immediately on both sides of each pilot burst to ensure that the pilot burst is received at or near its steady state value.

15. The method of claim 1, wherein the one or more signals used to derived the time reference for the communication system are received from a Global Positioning System (GPS) satellite constellation.

16. In a wireless communication system, a method for transmitting pilot references from a plurality of transmission sources, the method comprising:
at each transmission source

receiving one or more signals from a Global Positioning System (GPS) satellite constellation,

processing the one or more received signals to derive a time reference for the communication system,

generating a plurality of pilot bursts for a pilot reference, wherein the pilot bursts are in synchronization with the time reference, and

transmitting the plurality of pilot bursts at predetermined time intervals and at or near a maximum transmit power level of the transmission source, and

wherein pilot bursts from the plurality of transmission sources are
14 aligned in time at the time of transmission.

17. A wireless communication system comprising:
2 a plurality of access points, each access point configured to
receive one or more signals indicative of a time reference for the
4 communication system,
generate a plurality of pilot bursts for a pilot reference, wherein
6 the pilot bursts are in synchronization with the time reference, and
transmit the plurality of pilot bursts.

18. The communication system of claim 17, wherein pilot bursts from
2 the plurality of access points are aligned in time at the time of transmission.

19. The communication system of claim 17, wherein each access point
2 includes
a Global Positioning System (GPS) receiver configured to receive and
4 process one or more signals from a Global Positioning System (GPS) satellite
constellation to provide a signal indicative of the time reference for the
6 communication system.

20. The communication system of claim 17, wherein each access point
2 includes
a controller configured to receive the time reference for the
4 communication system and generate the plurality of pilot bursts.

21. The communication system of claim 17, wherein each access point is
2 configured to transmit the plurality of pilot bursts at or near a maximum
transmit power level for the access point.

22. An access terminal for use in a wireless communication system,
2 comprising:
an RF module configured to receive a modulated signal over a wireless
4 communication link and to condition the received signal to generate a
conditioned signal; and
6 a modem block coupled to the RF module and configured to process the
conditioned signal to recover a plurality of pilot references transmitted from a
8 plurality of access points, wherein the pilot reference from each access point is
transmitted in pilot bursts that are synchronized with a system time reference,

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23. The access terminal of claim 22, wherein the modem block is
2 configured to generate samples from the conditioned signal and to despread
the samples with a pseudo-noise (PN) sequence at a particular offset for each of
4 the plurality of access points.

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